

## SABIC Innovative Plastics Lexan® HFD4472 PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Lexan® HFD4472 is a 20% glass filled, medium flow, impact modified, injection moldable grade designed for high flow and superior surface appearance. HFD4472 has enhanced mold release, impact ductility and broad color space.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-HFD4472-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-HFD4472-PC-Europe-Africa-Middle-East.php)

| Physical Properties               | Metric                                               | English                                              | Comments                                |
|-----------------------------------|------------------------------------------------------|------------------------------------------------------|-----------------------------------------|
| Specific Gravity                  | 1.33 g/cc                                            | 1.33 g/cc                                            | ASTM D792                               |
| Density                           | 1.33 g/cc                                            | 0.0480 lb/in <sup>3</sup>                            | ISO 1183                                |
| Moisture Absorption               | 0.0400 %                                             | 0.0400 %                                             | 23°C / 50% RH; ISO 62                   |
| Water Absorption at Saturation    | 0.12 %                                               | 0.12 %                                               | ISO 62                                  |
| Linear Mold Shrinkage, Flow       | 0.0020 - 0.0030 cm/cm<br>@Thickness 3.20 mm          | 0.0020 - 0.0030 in/in<br>@Thickness 0.126 in         | SABIC Method                            |
| Linear Mold Shrinkage, Transverse | 0.0040 - 0.0050 cm/cm<br>@Thickness 3.20 mm          | 0.0040 - 0.0050 in/in<br>@Thickness 0.126 in         | SABIC Method                            |
| Melt Flow                         | 10 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C  | 10 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F  | ASTM D1238                              |
| Melt Index of Compound            | 9.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 9.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English   | Comments                     |
|---------------------------|----------|-----------|------------------------------|
| Tensile Strength at Break | 56.0 MPa | 8120 psi  | 5 mm/min; ISO 527            |
|                           | 56.0 MPa | 8120 psi  | Type I, 5 mm/min; ASTM D638  |
| Tensile Strength, Yield   | 54.0 MPa | 7830 psi  | 5 mm/min; ISO 527            |
|                           | 54.0 MPa | 7830 psi  | Type I, 5 mm/min; ASTM D638  |
| Elongation at Break       | 2.0 %    | 2.0 %     | 5 mm/min; ISO 527            |
| Elongation at Yield       | 2.0 %    | 2.0 %     | Type I, 5 mm/min; ASTM D638  |
| Tensile Modulus           | 5.50 GPa | 798 ksi   | 5 mm/min; ASTM D638          |
|                           | 93.0 MPa | 13500 psi | 1.3 mm/min, 50 mm span; ASTM |

| Flexural Yield Strength<br>Mechanical Properties | Metric                 | English                    | D790<br>Comments                   |
|--------------------------------------------------|------------------------|----------------------------|------------------------------------|
| Flexural Modulus                                 | 4.90 GPa               | 711 ksi                    | 1.3 mm/min, 50 mm span; ASTM D790  |
| Izod Impact, Notched                             | 1.90 J/cm              | 3.56 ft-lb/in              | ASTM D256                          |
| Izod Impact, Unnotched                           | 8.00 J/cm              | 15.0 ft-lb/in              | ASTM D4812                         |
| Izod Impact, Notched (ISO)                       | 18.0 kJ/m <sup>2</sup> | 8.57 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                |
|                                                  | 13.0 kJ/m <sup>2</sup> | 6.19 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Izod Impact, Unnotched (ISO)                     | 47.0 kJ/m <sup>2</sup> | 22.4 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1U                |
|                                                  | 43.0 kJ/m <sup>2</sup> | 20.5 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1U                |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Charpy Impact Unnotched                          | 5.90 J/cm <sup>2</sup> | 28.1 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eU |
|                                                  | 5.90 J/cm <sup>2</sup> | 28.1 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eU |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Charpy Impact, Notched                           | 2.10 J/cm <sup>2</sup> | 9.99 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                                                  | 1.30 J/cm <sup>2</sup> | 6.19 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Dart Drop, Total Energy                          | 30.0 J                 | 22.1 ft-lb                 | ASTM D3763                         |
|                                                  | @Temperature 23.0 °C   | @Temperature 73.4 °F       |                                    |

| Thermal Properties              | Metric                       | English                     | Comments    |
|---------------------------------|------------------------------|-----------------------------|-------------|
| CTE, linear, Parallel to Flow   | 30.0 µm/m-°C                 | 16.7 µin/in-°F              | ISO 11359-2 |
|                                 | @Temperature 23.0 - 80.0 °C  | @Temperature 73.4 - 176 °F  |             |
|                                 | 30.0 µm/m-°C                 | 16.7 µin/in-°F              | ASTM E 831  |
|                                 | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |             |
| CTE, linear, Transverse to Flow | 80.0 µm/m-°C                 | 44.4 µin/in-°F              | ISO 11359-2 |
|                                 | @Temperature 23.0 - 80.0 °C  | @Temperature 73.4 - 176 °F  |             |
|                                 | 80.0 µm/m-°C                 | 44.4 µin/in-°F              | ASTM E 831  |
|                                 | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |             |

| Thermal Properties                             | <sup>122 °C</sup><br>Metric  | <sup>270 °F</sup><br>English  | Comments              |
|------------------------------------------------|------------------------------|-------------------------------|-----------------------|
| Deflection Temperature at 0.46 MPa<br>(66 psi) | @Thickness 3.20 mm           | @Thickness 0.126 in           | unannealed; ASTM D648 |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 128 °C<br>@Thickness 3.20 mm | 262 °F<br>@Thickness 0.126 in | unannealed; ASTM D648 |
| Vicat Softening Point                          | 135 °C                       | 275 °F                        | Rate B/120; ISO 306   |
| UL RTI, Electrical                             | 80.0 °C                      | 176 °F                        | UL 746B               |
| UL RTI, Mechanical with Impact                 | 80.0 °C                      | 176 °F                        | UL 746B               |
| UL RTI, Mechanical without Impact              | 80.0 °C                      | 176 °F                        | UL 746B               |
| Flammability, UL94                             | HB<br>@Thickness 0.400 mm    | HB<br>@Thickness 0.0157 in    | UL 94                 |

| Descriptive Properties            | Value  | Comments       |
|-----------------------------------|--------|----------------|
| Ball Pressure Test, 125°C +/- 2°C | PASSES | IEC 60695-10-2 |

## Contact Songhan Plastic Technology Co.,Ltd.

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